

Patent Claims

1. Wire-stripping plier with automatic adaptation to various wire gauges and insulation thicknesses with two pairs of pivotable jaws of which the jaws of a first, outer pair are configured as gripper jaws (33) and that are pivotable by means of a first jaw arm (1) and a jaw part (3) about a common pivot point (5), and the jaws of the other, inner pair that are configured as cutting jaws (41) with blades that cut into the insulation, and with a pull rod (43) attached to the cutter jaws (41) and longitudinally moveable within the jaw body providing the stripping motion that is coupled with a second plier arm (7) via a link (9), characterized in that at least one sliding wedge (13, 23) is mounted in a recess shaped to match the sliding wedge (13, 23) within the first plier arm (1) or in the jaw part (3), whereby a first sliding wedge (15, 25) facing the cutting jaws is flat and a second sliding wedge (17, 27) resting in the recess is so shaped that the separation between both sliding wedges at a central area of the sliding wedge (13, 23) diminishes toward at least one of the two sliding wedge ends, and that squeezing the wire-stripping plier causes longitudinal displacement of the sliding wedge (13, 23) along with simultaneous matching of position of the sliding wedge (13, 23) perpendicular to the longitudinal direction that results in cutting-depth adjustment of the cutting jaws (41) and the cutting blade (37) attached to it.
2. Wire-stripping plier as in Claim 1, characterized in that a first sliding wedge (13) is mounted in a first recess in the first plier arm (1), and a second sliding wedge (23) is mounted in a recess in the jaw part (3), and that the second surfaces (17, 27) of the sliding wedge (13, 23) is bow-shaped.

3. Wire-stripping plier as in Claim 2, characterized in that the first sliding wedge (13) is connected with the jaw part (3) and the second sliding wedge (23) is connected with the first plier arm via a second coupling rod (29), and that, when the wire-stripping plier is compressed, the jaw part 3 is displaced longitudinally, while simultaneously the second coupling rod (29) holds the second sliding wedge (23) firmly, the jaw part (3) is extended outward by the movement about the second sliding wedge (23) and thus corresponding adaptation of the second sliding wedge (23) results from this relative displacement.
4. Wire-stripping plier as in one of Claims 1 to 3, characterized in that the side of the cutter jaws (41) facing the sliding wedge (13, 23) possesses a first projection (51) to create a point-shaped arrangement of the cutter jaws (41) on the sliding-wedge surface (15, 25) and a second projection (53) that centers the middle position of the moving cutter jaws.
5. Wire-stripping plier as in one of Claims 1 through 4, characterized in that each of the gripper jaws (33) possesses a raised gripper tooth (47), and that the raised gripper tooth (47) and the cutter blade (37) include one-sided mirror-image angled cutting strips.
6. Wire-stripping plier as in one of Claims 1 through 5, characterized in that the shape of the second surfaces (17, 27) causes a slight longitudinal displacement of the sliding-wedge surfaces (17, 27), which leads to a slight opening of the cutter blades (37) as the cutter jaws (41) glide during the stripping process.
7. Wire-stripping plier as in one of Claims 1 through 6, characterized in that the cutter blade (37) is attached to the cutter-jaw holders (41) so that it may be removed.
8. Wire-stripping plier as in one of Claims 1 through 7, characterized in that the gripper jaws (33) are mounted in receiver jaws (59) so that they may be removed, and that the separation of the gripper jaws (33) is adjustable with respect to the gripping plane.

9. Wire-stripping plier as in one of Claims 1 through 8, characterized in that a wire cutter (45) is positioned between the first plier arm (1) and the second plier arm (7).